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ABSTRACT OF THE DISCLOSURE

GPS-BASED TRAFFIC CONTROL PREEMPTION SYSTEM

5 A traffic control preemption system uses data received from a global
positioning system (GPS) to determine whether a vehicle issuing a preemption
request is within an allowed approach of an intersection. GPS signals are received
and processed by the vehicle module to generate vehicle data, including the
vehicle's position, heading and velocity. The vehicle data is transmitted via radio
transmission or some other medium. Each intersection has an associated
10 intersection module which, if within range of the vehicle's transmitting equipment,
compares the received vehicle data with a preprogrammed map of allowed
approaches to the intersection. If the vehicle data sufficiently matches the map of
allowed approaches, the vehicle's preemption request is forwarded to the
intersection controller to appropriately control the phase of the traffic signal at the
15 intersection.